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(54) Title: EXOSITE-DIRECTED THROMBIN INHIBITORS

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| 680 | KMHD <u>R</u> LEPEDEESDADYDYQNRL <u>A</u> AALGIR | 709 | SEQ ID NO. 1 |
|-----|--|-----|--------------|
| HC1 | KMHDRLEPED | | SEQ ID NO. 2 |
| HC2 | LEPEDEESDA | | SEQ ID NO. 3 |
| HC3 | EESDADYDYQ | | SEQ ID NO. 4 |
| HC4 | DYDYQNRLAA | | SEQ ID NO. 5 |
| HC5 | NRLAAALGIR | | SEO ID NO. 6 |

(57) Abstract: Disclosed are an amino acid sequence of the human blood clotting factor Va, peptides containing such sequence, and additional peptides of interest that significantly inhibit thrombin generation. Also disclosed are pharmaceutical compositions containing these peptides and related therapeutic methods for inhibiting thrombin generation and treating blood coagulation disorders.